deep-sea fishes of the world, with a table showing their distribution. A full bibliography and a number of other useful tables are also included. D. S. J.

Jenkins on Labroid Fishes of Hawaii. — In the *Bulletin of the United States Fish Commission* Dr. Oliver Peebles Jenkins, of Stanford University, gives an account of new species of labroid fishes obtained by him and by others in Honolulu in 1889 and later. The chief collection was made by Dr. Jenkins and his assistant, Dr. George C. Price, under the auspices of De Pauw University. Later, both Dr. Jenkins and Dr. Price were called to Stanford University, and the original collection of fishes, by far the largest yet made about the Hawaiian Islands, was supplemented by others, the principal one being made by Dr. Thomas D. Wood, also of Stanford University.

In the single group of Labridæ and Scaridæ twenty-two new species were obtained. These are described and figured in the present paper. These new species are the following:

Macropharyngodon aquilolo.
Halichœres iridescens.
Halichœres lao.
Hemicoris remedius.
Coris lepomis.
Hemicoris keleipionis.
Thalassoma pyrrhovinctum.
Novaculichthys woodi.
Novaculichthys entargyreus.
Hemipteronotus umbulatus.
Iniistius leucozonus.
Iniistius verater.
Cheilinus zonurus.
Pseudocheilinus octotænia.
Anampses evermanni.
Calotomus irradians.
Scarus brunneus.
Scarus gilberti.
Scarus paluca.
Scarus ahula.
Scarus miniatus.
Pseudoscarus jordani.

This list indicates the extreme richness of the Hawaiian fish fauna, its isolation and distinctness as compared with the fauna of the East Indies, and the fact that the few collections yet made about Honolulu have barely touched the wealth of the whole. D. S. J.

Greene on the Caudal Heart of the Hagfish. — In the *American Journal of Physiology* Dr. Charles Wilson Greene gives his studies on the caudal heart in the California hagfish, *Polistotrema stouti.* This structure was first discovered by Retzius in 1890, who accidentally noticed a paired pulsating organ in the tail of the slime eel (Myxine). The function of this structure is to drive the blood of the subcutaneous spaces back into the circulatory system.

We are pleased that Dr. Greene calls this curious animal by its

actual scientific name. Bdellostoma, like Amphioxus, has its place in the history of anatomy, but neither of these terms is the scientific name of anything, any more than lancelet is, or hag. Branchiostoma is the scientific name of the chief genus of lancelets.

Homea is the name of this group of hagfishes, Heptatrema and Bdellostoma being later synonyms of the same, with no standing in scientific nomenclature. For the species of Homea, with an increased number of gill openings, Dr. Gill has proposed the name of "Polistotrema." There are two species of Polistotrema, *P. dombey* of Chili and *P. stouti* of California. These are not very much unlike and may be really the same thing, though the balance of evidence at present favors their distinction as species. If one does not recognize the genus Polistotrema, the California hagfish, which is rapidly taking its place among the anatomical classics, must be *Homea stouti.*

D. S. J.

Jordan and Snyder on Fishes of Mexico.— In the winter of 1899–1900 Messrs. Jordan and Snyder made a large collection of fishes in the fresh waters of Mexico, especially about Guadalajara, Mexico, Aguas Calientes, Puente de Ixtla, San Luis Potosi, and Tampico. Forty species were taken, twenty of them being new to science, and four new genera, Istlarius (Siluridæ), Xystrosus, Falcula (Cyprinidæ), and Xenendum (Pœciliidæ).

The collection indicates that the river fauna of Central Mexico is far more abundant and characteristic than had been hitherto supposed. A most unexpected fact was the large number of very closely related species of Pescado del Rey, or Pescados Blancos, found in the great lake of Chapala. All are alike excellent as food, rich and delicate in flavor. The new species are all figured. These are the following:

Istlarius balsanus, a large catfish from Rio Ixtla, south of the volcanoes in Morelos.
Notropis rasconis, Rio Verde (Rascon), near San Luis Potosi.
Notropis calientes, Rio Verde de las Aguas Calientes.
Xystrosus popoche, Lake Chapala.
Falcula chapalæ, Lake Chapala.
Characodon encaustus, Lake Chapala.
Xenendum caliente, Aguas Calientes.

The genus Xenendum is allied to Goodea, but with bifurcate teeth, which, as in Goodea, are loosely attached. The intestines are very long, as in Pœcilia, but the sexes are similar.